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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,830	08/21/2003	Toshihiro Ise	Q76394	6159

23373 7590 07/21/2005

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER	
LE, THAO X	

ART UNIT	PAPER NUMBER
2814	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

Office Action Summary	Application No.	Applicant(s)	
	10/644,830	ISE, TOSHIHIRO	
	Examiner	Art Unit	
	Thao X. Le	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 27 June 2005 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 3-19 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The 'hydrogen' limitation in claim 1 line 4 does not have support in the specification. The specification consistently discloses the compound consisting of carbon, nitrogen, and fluorine in page 9-13. Thus, by adding the hydrogen

element into the disclosed compound of the instant application would have changed the scope of the invention or created a different compound.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-5, 7-13, 18-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6352791 to Fink et al. in view of JP 2001-247498 to Mori et al.

Regarding claims 1 and 20, Fink discloses a light emitting element in fig. 1 comprising at least one organic layer 6 which includes a light emitting layer 5, and which is disposed between a pair of electrodes 8/2, wherein at least one layer of the at least one organic layer 6 consisting of carbon and nitrogen, formula (I) in column 2.

But Fink does not disclose the organic layer consisting of carbon, fluorine, and nitrogen, and wherein the compound contains hydrogen atoms in an amount not greater than one hydrogen atom per six carbon atoms.

However, Fink discloses the X element in the R_1, R_2, and R_3 of formula (I) comprises halogen that would include fluorine, column 5 line 32. And Mori discloses an organic compound consisting of an aromatic ring and wherein the compound contains hydrogen atoms in an amount not greater than one hydrogen atom per six carbon atoms (C-F bonding). The structure contains zero hydrogen

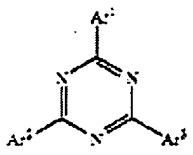
(less than one). At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the organic compound teaching of Mori to replace the R_1, R_2, and R_3 in Fink's compound, because it would have created an organic compound having high chemical and thermal stabilities and functions of carrier-transporting property as taught by Mori, see abstract.

Regarding claims 3-5, 21-23, Fink discloses the light emitting element wherein the compound consisting essentially of carbon, fluorine and nitrogen is a compound represented by the following general formula (A):

General formula (A)

X - (R)n

wherein in general formula (A), X represents an aromatic ring group or a hetero cyclic ring group, which have atoms selected from the group consisting of carbon, fluorine and nitrogen; R represents a group consisting of carbon and fluorine, or a group consisting of carbon, fluorine and nitrogen; n represents an integer of 1 or more; and when X contains no nitrogen, at least one R contains at least one nitrogen, wherein X further represents a single ring or a condensed ring, formula (I).



wherein in general formula (I), each of Ar^1, Ar^2 and Ar^3 represents an aryl group consisting of carbon and fluorine, formula (I), column 2 and 5 line 32.

Regarding claims 7-9, 25-27, Fink discloses the light-emitting element, wherein the compound has a glass transition temperature in a range of 130°C to 400°C.

The recitation of 'glass transition temperature in a range of 130°C to 400°C', 'excited triplet state is utilized the compound has a minimum excitation triplet energy level of 65kca1/mo1 (272.35kJ/mo1) to 95 kcal/mol (398.05 kJ/moll' are only a statement of the inherent properties of the compound. When the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. *In re Best*, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 10, 28, Fink discloses the light emitting wherein the compound is used as an electron transporting material, column 1 line 35.

Regarding claim 11, 13, 29, 31Fink discloses the light emitting element of claim 10, wherein the compound, which is used as an electron transporting material, is contained in an amount of 60 to 100% by mass in an organic layer containing the electron transporting material.

Although the prior art does not specially disclose the limitations '60 to 100% by mass' or '50 to 99.9% by mass', these features are obviously teaching of that limitations because the layer electron-conducting layer 6 would have 100% and each layer 5 and 6 would have about 50% to 99.9% by mass.

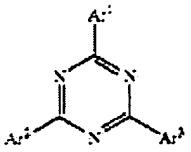
Regarding claim 12, 30, Fink discloses the light emitting element wherein the compound 6 is used as a host material in a layer containing a light emitting material 5, fig. 1, column 10 line 40.

Regarding claim 18-19, 35-36, Fink disclose the light emitting element comprise organic layer 6.

The process limitations "heating vapor deposition, coating, or transferring method" in claim 6 do not carry weight in a claim drawn to structure. In re Thorpe, 277 USPQ 964 (Fed. Cir. 1985).

6. Claims 6, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6352791 to Fink et al and JP 2001-247498 to Mori et al. as applied in the above claims and further in view of US 6166125 to Sugiyama et al.

Regarding claims 6 and 24, Fink discloses the light emitting element comprise triazine having the formula:



But, Fink does not disclose the Ar^{1-3} is selected from the group consisting of perfluorophenyl.

However, Sugiyama reference disclose the triazine ring, column 4 line 35, consisting of perfluorophenyl, column 18 line 11. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the perfluorophenyl substituent teaching of Sugiyama in Fink's triazine ring, because it would have created an optical plastic material having improved thermal resistance as taught by Sugiyama, column 11 lines 38-42.

7. Claims 14-17, 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6352791 to Fink et al and JP 2001-247498 to Mori et al. as applied in the above claims and further in view of Applicant Admitted Prior Art (APA).

Regarding claims 14-17, Fink does not disclose the light emitting wherein the one organic layer contains a phosphorescent material comprises metal complex consisting of iridium complex.

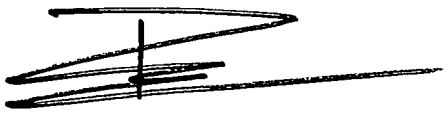
However, APA discloses organic EL element comprise iridium complex, specification page 1. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the iridium complex teaching of APA with Fink's organic layer, because it would have improve the device efficiency as taught by APA, specification page 1.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X. Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thao X. Le
Patent Examiner
20 July 2005